

681 specimens from one-fourth to full size there was no sinistral shell, but of 410 uterine young three were sinistral.

A note from Jennie E. Letson in NAUTILUS, vol. xi, July, 1897, page 33, stated that the collection of about a hundred species of *Ampullaria* in the Philadelphia Academy of Natural Sciences had only one sinistral shell, and that was *A. conica* Wood, but she did not state the locality of it.

In NAUTILUS, vol. v, page 83, Leslie M. Cockerell of Norwood, San Miguel County, Colorado, reported a sinistral *Patula cooperi*. Pilsbry added a note that while this was a rare malformation in America, it occurred more frequently with this than in most species, and that several cases were on record.

F. C. Baker in "The Lymnæidæ of North and Middle America," says that a sinistral Lymnæa is rarely found. A *Galba obrussa* was found in the collection of Henry Hemphill, and a *Galba palustris* in the collection of Dr. W. A. Nason.

I have in my collection two sinistral shells of *Campeloma sub-solidum*, from Flat creek, in Pettis County, Missouri, and a *Pyramidula alternata* Say, from near Columbia, Mo. This is the first sinistral land shell I have ever found.

In the neighborhood of this town I have found more abnormal crinoids, than in all other localities combined ; but whatever the causes may have been to produce these malformations, they have not noticeably operated to produce abnormal shells.

Columbia, Mo.

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#### MOLLUSKS OF ANAHEIM BAY, CALIFORNIA.

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BY E. P. CHACE.

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I am enclosing a list of shells that were collected at Anaheim Landing by myself and wife with a little help at times, the shells being all in my collection. I have done no dredging and think that if I did I would add several species to the list. The total length of shore included in the collecting is less than  $3\frac{1}{2}$  miles, about  $\frac{1}{2}$  being in the bay and the rest ocean beach, and no rocks in sight within 4 to 5 miles.

*Collected at Anaheim Bay.*

Acanthina spirata, Blainville	Conus californicus Hds.
Alectrion fossata, Gld.	Crepidula onyx rugosa, Nutt.
Alectrion mendica cooperi, Fbs.,	Crucibulum spinosum, Sby.
Alectrion perpinguis, Gld.	Haminea vesicula, Gld.
Arcularia tegula, Rve.	Littorina scutulata, Gld.
Bullaria gouldiana, Pils.	Lucapina crenulata, Sby.
Calliostoma gemmulatum, Cpr.	Lucapinella calliomarginata,
Calliostoma tricolor, Gabb.	Cpr.
Cerithidea californica, Hald.	Melampus olivaceus, Cpr.
Cerithiopsis carpenteri, Bartsch.	Olivella biplicata, Sby.
Cerithiopsis pedroana, Bartsch.	Olivella pedroana, Cpr.
Columbella gausapata, Gld.	Phasianella compta, Gld.
Columbella gausapata carinata,	Polynices lewisii, Gld.
Hds.	Polynices recluziana, Desh.

*In the vicinity of the Bay :*

Cardium quadragenarum, Conr.	Paphia staminea laciniata,
Cardium substriatum, Conr.	Cpr.
Chione fluctifraga, Sby.	Pecten circularis aequisulcat-
Chione succincta, Val.	us, Cpr.
Chione undatella, Sby.	Petricola denticulata, Sby.
Cooperella subdiaphana, Cpr.	Pholas pacifica, Stearns.
Diplodonta orbella, Gld.	Platyodon cancellatus, Conr.
Donax californica, Conr.	Psammobia californica.
Heterodonax bimaculatus,	Sanguinolaria nuttallii, Conr.
D'Orb.	Saxidomas nuttallii, Conr.
Macoma indentata, Cpr.	Schizothaerus nuttallii, Conr.
Macoma nasuta, Conr.	Tagelus californianus, Conr.
Mactra californica, Conr.	Tagelus californianus subteres,
Modiolus capax, Conr.	Conr.
Ostraea lurida rufoides, Cpr.	Tellina carpenteri, Dall.
Paphia staminea, Conr.	Zirfaea gabbi, Tryon.

*Collected alive, on the sandbars and beach near the entrance of the Bay.*

Bursa californica.	Tivela crassatelloides, Conr.
Donax levigata, Desh.	Turris ophioderma, Dall.
Murex festivus, Hds.	

Washed up on the beach after storms, alive or very fresh.

Amiantis callosa, Conr.	Metis alta, Conr.
Chama exogyra, Conr.	Modiolus flabellatus, Gld.
Chama pellucida, Sby.	Modiolus rectus, Conr.
Cryptomya californica, Conr.	Paphia tenerrima, Cpr.
Glottidea albida, Hds.	Periploma discus, Stearns.
Macoma secta, Conr.	Periploma planiuscula, Sby.
Macra hemphilli, Dall.	Siliqua lucida, Conr.
Macra planulata.	Solen rosaceus, Cpr.

*Dead shells collected on the beach.*

Bathytoma tryoniana.	Anomia peruviana (upper valves).
Dentalium neohexagonum, S&P.	Labiosa undulata, Gld. (broken valves).
Epitonium hindsii, Cpr.	Macra catilliformis, Conr.
Sinum debilis, Gld.	Panopea generosa, Gld.
Turritella cooperi, Cpr.	Pecten giganteus, Gray.
Epitonium bellastratum, Cpr. (fragment).	Thracia plicata.
	Yoldia cooperi, Gabb. (valves only).

*Collected on the piles of the bridge across the entrance of the Bay.*

Acmaea patina, Esch.	Lasaea rubra, Mont.
Acmaea persona, Esch.	Myrina diegensis, Dall.
Littorina planaxis, Nutt.	Mytilus californianus, Conr.
Littorina scutulata, Gld.	
Cypraea spadicea, Gray. (1 only)	

Occasionally a rock washes in on the beach containing some Lithophagus plumula, Cpr. and Kellia laperousii, Desh. and the kelp brings in Acmaea inessa, Hds. Eulima (species undetermined) has been found in a kelp holdfast and a dead Polynices lewis with 7 Crepidula excavata, Brod. on it washed in after a storm.

Most of the shells listed above were collected by Mr. and Mrs. E. P. Chace within the last three years. The others were collected by Mrs. J. E. Herbst, Valentine Herbst and Otto Keim, and were collected during the same period of time.